FSD Laboratory 02

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Aim: Design and develop a responsive web page using Bootstrap front end framework.

Objectives:

1. To understand HTML tags
2. To learn the styling of web pages using CSS
3. To learn Bootstrap Front End Framework.

Theory

1. Bootstrap Grid System

The Bootstrap Grid System is a powerful tool for creating flexible and responsive web layouts. It is based on a 12-column layout, which helps designers and developers to structure their content in a way that adapts to various screen sizes.

Here's a quick overview of how it works:

- **Columns and Rows:** The grid system uses a series of rows and columns to layout and align content. Rows are wrappers for columns, and columns are the building blocks of the layout.
- **Breakpoints:** Bootstrap's grid system is responsive, meaning it changes based on the screen size or viewport width. Bootstrap provides several breakpoints (such as `xs`, `sm`, `md`, `lg`, `xl`, and `xxl`) to target different device sizes.
- **Classes:** You use classes like `.col`, `.col-md-6`, `.col-lg-4`, etc., to define how many columns an element should span at different breakpoints. For instance, `.col-md-6` will make an element span 6 columns in medium-sized viewports.

2. Bootstrap .container and .container-fluid Class

- **.container:** This class provides a fixed-width container that changes size depending on the viewport. It centers your content and provides responsive padding. For example, a `.container` element will have different maximum widths for different breakpoints (e.g., 540px, 720px, 960px, etc.).
- **.container-fluid:** Unlike `.container`, `.container-fluid` extends the full width of the viewport. It provides a fluid container that adapts to the width of the screen, with 15px padding on either side by default.

FAQ

1. What is a responsive website?

A responsive website is designed to work well on a variety of devices and screen sizes. This approach ensures that a website's layout adjusts dynamically to provide an optimal viewing experience, whether it's on a desktop, tablet, or smartphone. Responsive design often involves flexible grids, fluid images, and media queries to achieve this adaptability.

2. How Bootstrap helps to design a responsive website?

Bootstrap simplifies the process of creating a responsive website by providing:

- **Grid System:** The 12-column grid system allows developers to create layouts that adjust according to the screen size.
- **Predefined Classes:** Bootstrap includes various classes for responsive design (e.g., `.d-none`, `.d-sm-block`) and utilities for visibility, spacing, and alignment.
- **Media Queries:** Bootstrap's responsive utilities make it easy to apply different styles at different breakpoints, ensuring that your design looks good on all devices.
- **Components:** Bootstrap offers responsive components (like navbars, modals, and carousels) that adapt to screen sizes and orientations.

Problem Statement:

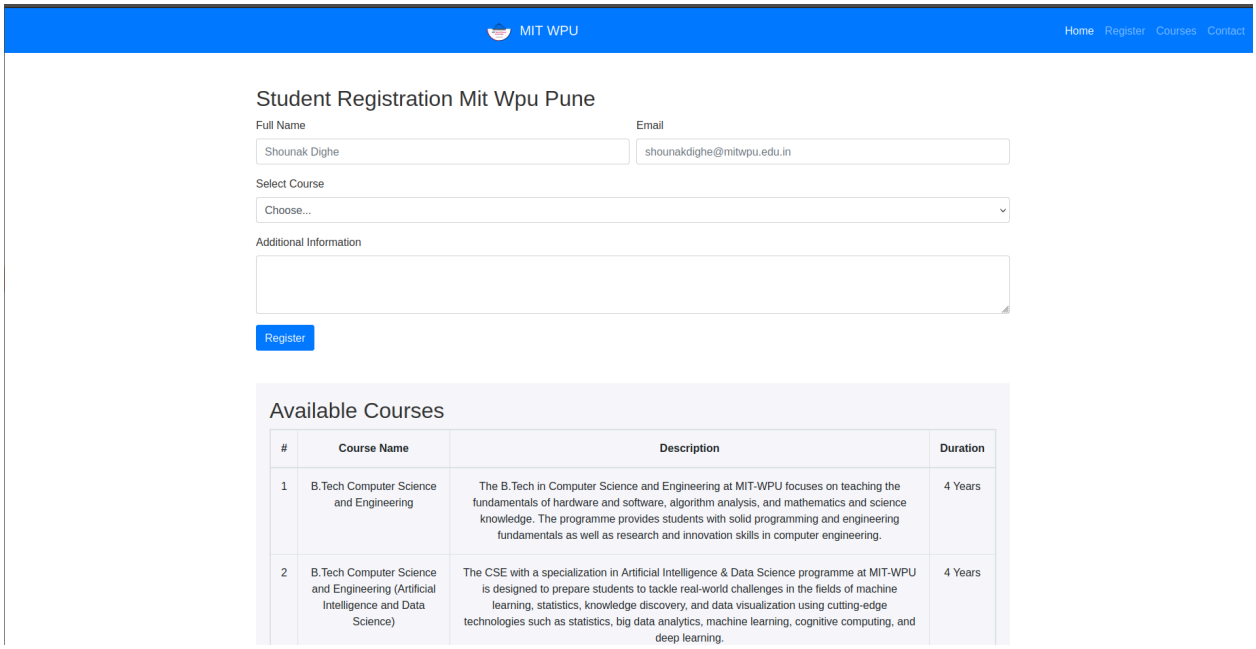
Design and develop a responsive web page (For example student registration, course enrollment, library management system, online shopping system etc.) using Bootstrap front end framework. Web pages should contain HTML5 elements (Use all possible formatting for example font, colour etc.).

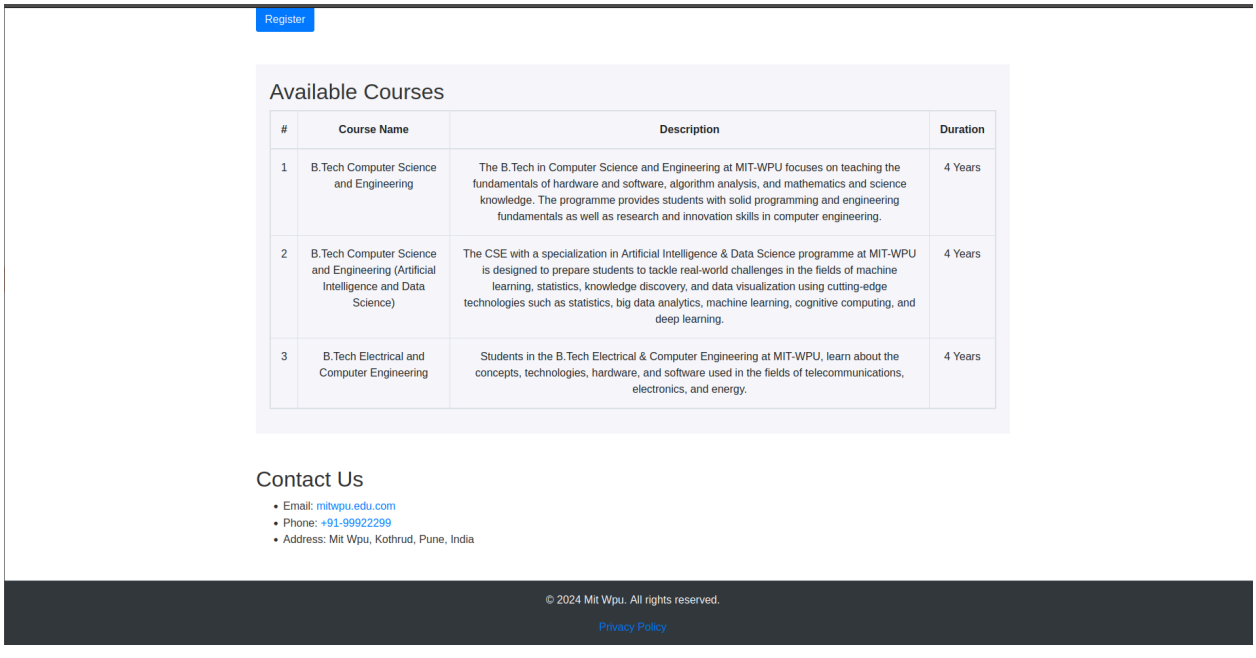
Web page should include various

- images,
- links within the page,
- tables
- lists
- form elements
- paragraphs
- links to other pages for navigation,
- new tabs.

Use Cascaded Style Sheets (CSS) to style the web pages designed. Make use of

- Three types of styles (Inline, Internal and External)
- border,
- margins,
- padding,
- navigation,
- dropdown list
- tag selector
- class selector
- id selector
- exploring background image and position property etc.


MIT WPU
Home
Register
Courses
Contact
Student Registration Mit Wpu Pune
Full Name
Shounak Dighe
Email
shounakdighe@mitwpu.edu.in
Select Course
Choose...
Additional Information
Register
Available Courses
| Course Name | Description | Duration
1 | B.Tech Computer Science and Engineering | The B.Tech in Computer Science and Engineering at MIT-WPU focuses on teaching the fundamentals of hardware and software, algorithm analysis, and mathematics and science knowledge. The programme provides students with solid programming and engineering fundamentals as well as research and innovation skills in computer engineering. | 4 Years
2 | B.Tech Computer Science and Engineering (Artificial Intelligence and Data Science) | The CSE with a specialization in Artificial Intelligence & Data Science programme at MIT-WPU is designed to prepare students to tackle real-world challenges in the fields of machine learning, statistics, knowledge discovery, and data visualization using cutting-edge technologies such as statistics, big data analytics, machine learning, cognitive computing, and deep learning. | 4 Years


Register
Available Courses
| Course Name | Description | Duration
1 | B.Tech Computer Science and Engineering | The B.Tech in Computer Science and Engineering at MIT-WPU focuses on teaching the fundamentals of hardware and software, algorithm analysis, and mathematics and science knowledge. The programme provides students with solid programming and engineering fundamentals as well as research and innovation skills in computer engineering. | 4 Years
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3 | B.Tech Electrical and Computer Engineering | Students in the B.Tech Electrical & Computer Engineering at MIT-WPU, learn about the concepts, technologies, hardware, and software used in the fields of telecommunications, electronics, and energy. | 4 Years
Contact Us
Email: mitwpu.edu.com
Phone: +91-99922299
Address: Mit Wpu, Kothrud, Pune, India
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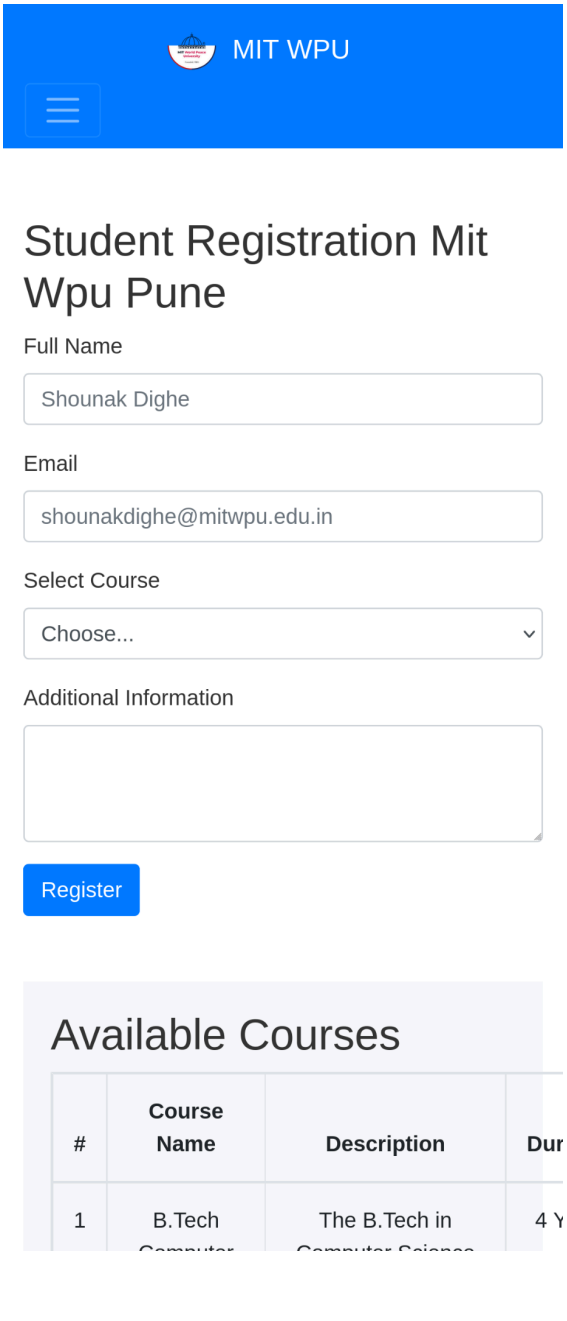
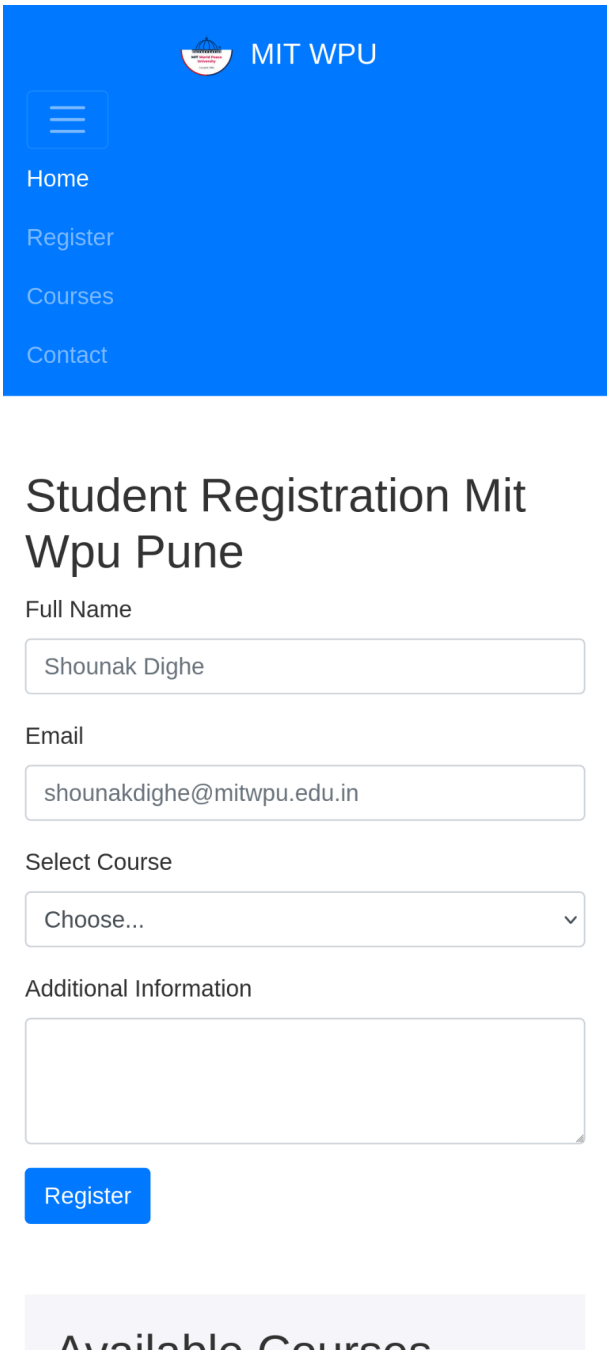
Privacy Policy

Mobile view :


MIT WPU
Student Registration Mit Wpu Pune
Full Name
Shounak Dighe
Email
shounakdighe@mitwpu.edu.in
Select Course
Choose...
Additional Information
Register
Available Courses
Course Name Description Dur
1 B.Tech The B.Tech in 4 Y


MIT WPU
Home
Register
Courses
Contact
Student Registration Mit Wpu Pune
Full Name
Shounak Dighe
Email
shounakdighe@mitwpu.edu.in
Select Course
Choose...
Additional Information
Register

	Science)	challenges in the fields of machine learning, statistics, knowledge discovery, and data visualization using cutting-edge technologies such as statistics, big data analytics, machine learning, cognitive computing, and deep learning.	
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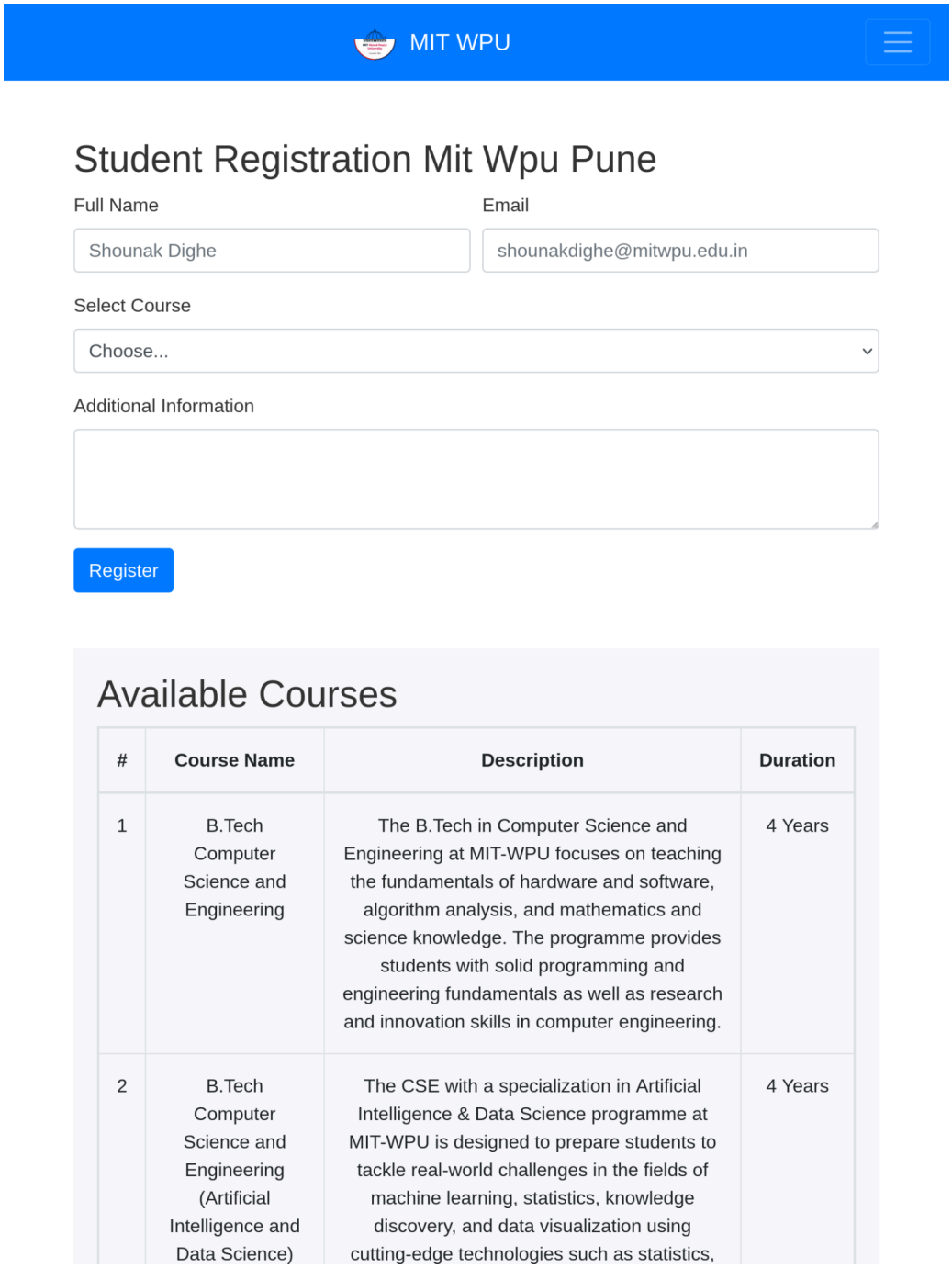
Tablet View :


MIT WPU
Student Registration Mit Wpu Pune
Full Name
Shounak Dighe
Email
shounakdighe@mitwpu.edu.in
Select Course
Choose...
Additional Information
Register
Available Courses
Course Name Description Duration
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2 B.Tech Computer Science and Engineering (Artificial Intelligence and Data Science) The CSE with a specialization in Artificial Intelligence & Data Science programme at MIT-WPU is designed to prepare students to tackle real-world challenges in the fields of machine learning, statistics, knowledge discovery, and data visualization using cutting-edge technologies such as statistics, 4 Years

Available Courses

#	Course Name	Description	Duration
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Code :

index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Student Registration System</title>
    <!-- Bootstrap CSS -->
                                                                    <link
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min
.css" rel="stylesheet">
    <!-- External CSS -->
    <link href="styles.css" rel="stylesheet">
    <style>
        /* Inline CSS for quick customizations */
        .header-bg {
            background-image: url('header-bg.jpg');
            background-size: cover;
            color: white;
        }
    </style>
</head>
<body>
    <!-- Navigation Bar -->
<nav class="navbar navbar-expand-lg navbar-dark bg-primary">
    <a class="navbar-brand" href="#">
        <img src="mitwpulogo.png" alt="MIT WPU Logo" class="logo-img">
        MIT WPU
    </a>
      <button  class="navbar-toggler"  type="button"  data-toggle="collapse"
data-target="#navbarNav"  aria-controls="navbarNav"  aria-expanded="false"
aria-label="Toggle navigation">
        <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarNav">
        <ul class="navbar-nav">
            <li class="nav-item active">
```

```
                                <a  class="nav-link"  href="#">Home  <span
class="sr-only">(current)</span></a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="#registration">Register</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="#courses">Courses</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="#contact">Contact</a>
            </li>
        </ul>
    </div>
</nav>


    <!-- Main Content -->
    <main class="container mt-5">
        <!-- Registration Form -->
        <section id="registration" class="mb-5">
            <h2>Student Registration Mit Wpu Pune</h2>
            <form action="#" method="post">
                <div class="form-row">
                    <div class="form-group col-md-6">
                        <label for="name">Full Name</label>
                          <input type="text" class="form-control" id="name"
placeholder="Shounak Dighe" required>
                    </div>
                    <div class="form-group col-md-6">
                        <label for="email">Email</label>
                        <input type="email" class="form-control" id="email"
placeholder="shounakdighe@mitwpu.edu.in" required>
                    </div>
                </div>
                <div class="form-group">
                    <label for="course">Select Course</label>
                    <select id="course" class="form-control" required>
                        <option value="">Choose...</option>
                        <option value="web-dev">Web Development</option>
                        <option value="data-science">Data Science</option>
                        <option value="ai">Artificial Intelligence</option>
```

```
                </select>
            </div>
            <div class="form-group">
                <label for="message">Additional Information</label>
                        <textarea class="form-control" id="message"
rows="3"></textarea>
            </div>
                                    <button type="submit" class="btn
btn-primary">Register</button>
        </form>
    </section>

    <!-- Courses Table -->
    <section id="courses" class="mb-5">
        <h2>Available Courses</h2>
        <table class="table table-bordered">
            <thead>
                <tr>
                    <th>#</th>
                    <th>Course Name</th>
                    <th>Description</th>
                    <th>Duration</th>
                </tr>
            </thead>
            <tbody>
                <tr>
                    <td>1</td>
                    <td>B.Tech Computer Science and Engineering</td>
                    <td> The B.Tech in Computer Science and Engineering
at MIT-WPU focuses on teaching the fundamentals of hardware and software,
algorithm analysis, and mathematics and science knowledge. The programme
provides students with solid programming and engineering fundamentals as
well as research and innovation skills in computer engineering. </td>
                    <td>4 Years</td>
                </tr>
                <tr>
                    <td>2</td>
                        <td>B.Tech Computer Science and Engineering
(Artificial Intelligence and Data Science)</td>
                    <td>The CSE with a specialization in Artificial
Intelligence & Data Science programme at MIT-WPU is designed to prepare
students to tackle real-world challenges in the fields of machine
```

```
learning, statistics, knowledge discovery, and data visualization using cutting-edge technologies such as statistics, big data analytics, machine learning, cognitive computing, and deep learning.</td>
                        <td>4 Years</td>
                    </tr>
                    <tr>
                        <td>3</td>
                        <td>B.Tech Electrical and Computer Engineering</td>
                           <td>Students in the B.Tech Electrical & Computer Engineering at MIT-WPU, learn about the concepts, technologies, hardware, and software used in the fields of telecommunications, electronics, and energy.</td>
                        <td>4 Years</td>
                    </tr>
                </tbody>
            </table>
        </section>

        <!-- Contact Information -->
        <section id="contact" class="mb-5">
            <h2>Contact Us</h2>
            <ul>
                                                    <li>Email:    <a href="mailto:info@example.com">mitwpu.edu.com</a></li>
                <li>Phone: <a href="tel:+1234567890">+91-99922299</a></li>
                <li>Address: Mit Wpu, Kothrud, Pune, India</li>
            </ul>
        </section>
    </main>

    <!-- Footer -->
    <footer class="bg-dark text-white text-center py-3">
        <p>&copy; 2024 Mit Wpu. All rights reserved.</p>
        <a href="privacy-policy.html" target="_blank">Privacy Policy</a>
    </footer>

    <!-- Bootstrap JS and dependencies -->
                                                    <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
                                                    <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"></script>
```

```
                                                                    <script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.j
s"></script>
</body>
</html>
```

styles.css

```
/* External CSS */

/* Tag Selector */
body {
    font-family: Arial, sans-serif;
    color: #333;
}

/* Class Selector */
.header-bg {
    background-image: url('header-bg.jpg');
    background-size: cover;
    background-position: center;
    color: white;
}

/* ID Selector */
#courses {
    background-color: #f8f9fa;
    padding: 20px;
}

/* Border, Margin, Padding */
.table {
    border: 2px solid #dee2e6;
}

.table th, .table td {
    padding: 15px;
    text-align: center;
}
```

```
footer {
   border-top: 1px solid #6c757d;
   margin-top: 20px;
}

/* Background Image and Position */
.header-bg {
   background-position: center;
}

/* External CSS */

/* Styling for the logo */
.logo-img {
   height: 40px; /* Adjust the height as needed */
   margin-right: 10px; /* Space between logo and text */
}

/* Centering the logo in the navbar */
.navbar-brand {
   display: flex;
   align-items: center;
   justify-content: center;
   width: 90%; /* Make sure it takes the full width */
}
```